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through a telescope the nebulous part seemed completely to surround the nucleus in the form of an oval. The greatest diameter from E.S.E. to W.N.W. about 1° in length. The lesser diameter about 30′.

May 7. Comet growing fainter. Distance to comparison stars measured with difficulty.

For several days subsequent to the last observation the comet could be seen through a telescope, gradually diminishing in size, but retaining very nearly the same position in the heavens.

The following table gives the observations made between April 30th and May 7th, with stars lying near the comet's path, and the computed places resulting therefrom. The observations are uncorrected for refraction :*—

Date.	Position of Ship.	Approx. G.M.T.	Distance from Comparison Stars.		Computed R.A.	Computed Decl.
1853.	° ′	h m		° ′	h m s	° ′
April 30	35 50 S	4 17	*α* Orionis ...	33 6	3 57 47	−11 28·5
	36 15 E		*η* Argûs	85 28		
May 1	35 13 S	4 18	Rigel	5 58	4 54 17	−13 23·5
	39 38 E		Sirius	25 23		
2	33 58 S	4 14	Rigel	8 4	5 31 14	−13 57·4
	44 26 E		Canopus ...	39 54		
5	28 25 S	4 5	*β* Can. Maj.	4 3	6 23 27	−14 12·7
	54 23 E		Sirius	4 20		
6	25 34 S	4 12	Canopus ...	38 44	6 29 45	−13 55·0
	56 16 E		Procyon	24 50		
7	22 32 S	4 9	*β* Can. Maj.	6 46	6 38 26	−13 41·3
	57 27 E		Sirius	2 50		

May 5. Assumed position of *β* Can. Maj., $6^h\ 16^m\ 22^s$, 17° 53′ 16″ S.
May 6 and 7. Comet growing faint; observations made with difficulty.

Capt. Shadwell has also communicated some physical observations of the same comet by M. Bosquet, the Government Meteorological Observer at the Mauritius. An account of these will be given in the *Notice* for November.

Comet III., 1853.

This comet, which was discovered by M. Klinkerfues at Göttingen, on the 10th of June last, became distinctly visible to the naked eye towards the end of August, agreeably to the prediction of M. Brühns (*Ast. Nach.* No. 869). It has even been observed in full daylight with the telescope, both by Mr. Hartnup and M. Julius Schmidt.

The following, which may be considered as the most recent

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* Accompanying these observations was also a very neatly-executed chart, exhibiting the comet's path through the stars in its vicinity.

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determination of the orbit of this comet is by M. D'Arrest (*Ast. Nach.* No. 875, p. 192):—

T ... 1853, Sept. 1·74969 M.T. Berlin.
° ′ ″
π .... 310 58 29·8 } Mean Equinox,
☊ .... 140 31 3·4 } 1853·0.
i .... 61 30 46·2
Log *q* ...... 9·4867092
Motion direct.

Discovery of a New Comet. By M. Brühns.

On the night of the 11th September, M. Brühns, of the Berlin Observatory, discovered in the constellation of the *Lynx* a pretty large nebulous object, having some resemblance to a cluster of stars, but which from its proper motion he soon recognised to be a comet.

1853.	M.T. Berlin. h m s	R.A. ° ′ ″	Decl. ° ′ ″
Sept. 11	13 12 15·3	126 59 11·5	+44 51 33·6
13	12 6 31·0	129 33 3·7	+43 47 17·4
15	12 13 53·8	132 22 8·9	+42 29 54·5

The following elements of this comet have been calculated by M. Brühns from the observations of Sept. 11, 16, and 21:—

Comet IV. 1853.

T .... Oct. 16·6304
° ′ ″
π .... 301 55 8·8 } Mean Equinox,
☊ .... 220 19 11·8 } 1853·0.
i .... 61 15 55·2
Log *q* ...... 9·23106
Motion retrograde.

Explanation of some Points relative to the Photometry of Telescopic Stars. By the Rev. W. R. Dawes.

In an Appendix to the twelfth volume of the Radcliffe Observations, recently published, is contained a series of highly interesting and valuable remarks and observations on the photometry of stars by means of the heliometer. In referring to a paper of mine, "On a Photometrical Method of Determining the Magnitudes of Telescopic Stars," which was printed in the *Monthly Notices* for June 1851, Mr. Johnson has suggested (see p. 16 of the Appendix), that in my observations, according to that method, I probably diminished not only the aperture of the telescope, but "also the pupil of my own eye to $\frac{3}{5}$ of its natural dimensions, and thus curtailed its capacity for receiving light:" and proceeding upon this

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